

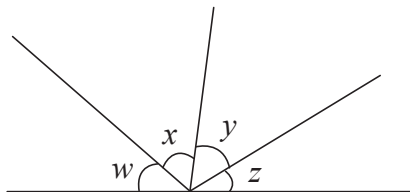
Triangles, Quadrilaterals and Polygons

Properties of angles

Angles on a straight line

$$\angle w + \angle x + \angle y + \angle z = 180^\circ$$

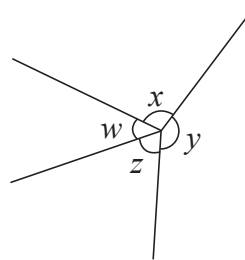
(\angle s on str. line)



Angles at a point

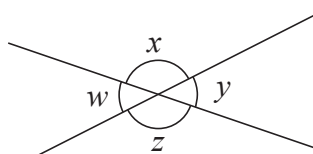
$$\angle w + \angle x + \angle y + \angle z = 360^\circ$$

(\angle s at a pt.)



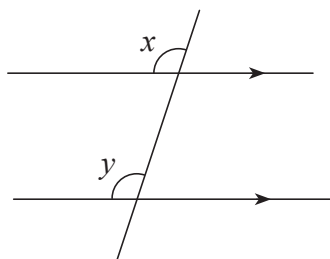
Vertically opposite angles

$$\angle w = \angle y \text{ (vert. opp. } \angle\text{s)}$$
$$\angle x = \angle z \text{ (vert. opp. } \angle\text{s)}$$



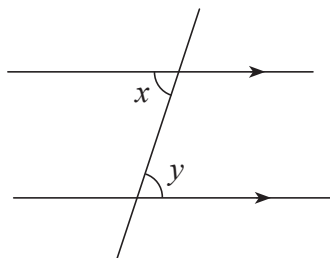
Corresponding angles

$$\angle x = \angle y \text{ (corr. } \angle\text{s)}$$



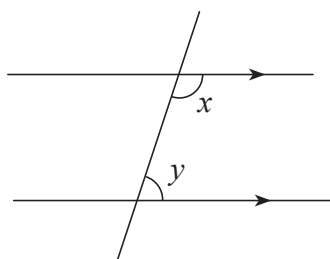
Alternate angles

$$\angle x = \angle y \text{ (alt. } \angle\text{s)}$$



Interior angles

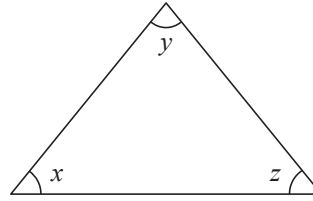
$$\angle x + \angle y = 180^\circ \text{ (int. } \angle\text{s)}$$



Angle properties of triangles

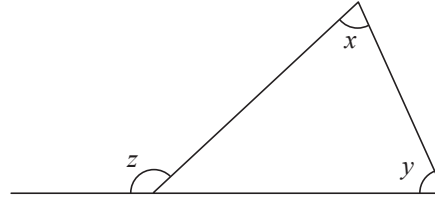
Sum of angles in a triangle

$$\angle x + \angle y + \angle z = 180^\circ \text{ (sum of } \angle\text{s in } \Delta)$$



Exterior angles of a triangle

$$\angle x + \angle y = \angle z \text{ (ext. } \angle\text{s of } \Delta)$$



Exterior angles of a Polygon

- Sum of exterior angles of any polygon = 360° .
- For an n -sided regular polygon, each exterior angle = $\frac{360^\circ}{n}$.

Interior angles of a Polygon

- Sum of interior angles of any n -sided polygon = $180^\circ \times (n - 2)$.
- For an n -sided regular polygon, each interior angle = $\frac{180^\circ \times (n - 2)}{n}$.